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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,615	01/11/2002	Troy A. Miller	DEAU /37	9471

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EXAMINER
KRAMER, DEVON C

ART UNIT	PAPER NUMBER
3683	9

DATE MAILED: 04/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/044,615	MILLER ET AL.	
	Examiner	Art Unit	
	Devon C Kramer	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5 and 14-17* is/are allowed.

6)☒ Claim(s) *1-4,6-9,11 and 12* is/are rejected.

7)☐ Claim(s) *10 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2 AND 3* .
4) ☐ Interview Summary (PTO-413) Paper No(s) _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

Claim Rejections - 35 USC § 102

1) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2) Claims 1-2 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Engel et al (5207300).

In reference to claim 1, Engel et al provides a suspension damper comprising: a cylinder (1) defining a cavity being substantially filled with a fluid; a piston (3) slidably positioned in the cylinder separating the cavity into a compression chamber and an extension chamber; a rod (2) coupled to the piston and extending through one of the chambers and exiting the cavity; a tapered interface (at threads or at insteps as rod attaches to piston) between the rod and the piston to thereby align the rod relative to the piston; a passage (5) through with the fluid moves between the extension chamber and the compression chamber during sliding of the piston in the cylinder; an air pressure actuated control valve assembly (8) responsive to an air pressure input for adjustment to and between a plurality of positions to control the movement of fluid in the passage between the extension and compression chambers (col 4 lines 9-15); wherein the damping force of the suspension damper is a function of the air pressure input; and wherein the tapered interface provides a fluid tight seal.

In reference to claim 2, Engel et al provides a suspension damper where a shoulder on a portion of the rod; and a confronting surface on a portion of the piston proximate the shoulder constitute the tapered interface.

In reference to claim 11, Engel et al provides a suspension damper comprising: a cylinder (1) defining a cavity being substantially filled with a fluid; a piston (3) slidably positioned in the cylinder separating the cavity into a compression chamber and an extension chamber; a rod (2) coupled to the piston and extending through one of the chambers and exiting the cavity; a tapered interface (at threads or at insteps as rod attaches to piston) between the rod and the piston to thereby align the rod relative to the piston; a passage (5) through with the fluid moves between the extension chamber and the compression chamber during sliding of the piston in the cylinder; an air pressure actuated control valve assembly (8) responsive to an air pressure input for adjustment to and between a plurality of positions to control the movement of fluid in the passage between the extension and compression chambers (col 4 lines 9-15); wherein the damping force of the suspension damper is a function of the air pressure input; wherein the tapered interface provides a fluid tight seal; a uni-directional seal plate (8) mounted in the piston assembly and in communication with the air-pressure actuated control valve; wherein the uni-directional seal plate (8) is adapted from mounting in the piston assembly in a predetermined orientation.

In reference to claim 12, Engel et al provides a seal plate where a step extended around a perimeter thereof

Claim Rejections - 35 USC § 103

3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4) Claims 3-4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et al in view of Wells et al (5038897).

Engel provides all of the limitations of the claim (please see 102 rejection of claim 1), but lacks the teaching of a resistance weld interface between the rod and the piston.

Wells et al teaches a resistance welded interface between the piston and the rod (col 1 lines 32-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the piston and rod assembly of Engel with the weld attachment as taught by Wells merely to provide an alternate means of attaching the two together and further to save money on production costs.

5) Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et al in view of de Molina (5725239).

Engel teaches all of the claim limitations (see 102 rejection above), but lacks the teaching of controlling the valve in response to a function of weight and a condition of the road.

De Molina teaches the practice of varying the damping in response to a vehicle weight and a condition of a road.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the assembly of Engel with means to vary the damping rate in response to weight and road condition as taught by De Molina in order to provide a driver with a more comfortable ride and to improve the performance of the vehicle.

6) Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engel in view of De Molina and further in view of Wells et al.

Engel as modified by de Molina provide all of the limitations of the claims (please see 102 rejection of claim 1), but lacks the teaching of a resistance weld interface between the rod and the piston.

Wells et al teaches a resistance welded interface between the piston and the rod (col 1 lines 32-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the piston and rod assembly of Engel as modified by de Molina with the weld attachment as taught by Wells merely to provide an alternate means of attaching the two together and further to save money on production costs.

Allowable Subject Matter

7) Claims 5, and 14-17 are allowed.

8) Claims 10 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Vermolen et al, Heinz et al and Lee all provide valves controlled by air pressure.

10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C Kramer whose telephone number is 703-305-0839. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-3519 for regular communications and 703-308-3519 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1134.

DK
March 30, 2003

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER